

SOME INTESTINAL PARASITES OF *NATRIX SIPEDON*  
LINN., WITH NOTES ON THE IDENTITY OF  
*OPHIOTAENIA (TAENIA) LACTEA* LEIDY  
WITH *OPHIOTAENIA PERSPICUA* LARUE<sup>1</sup>

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The study on which this report is based was begun during the summer of 1929 at the Franz Theodore Stone Laboratory of Ohio State University at Put-in-Bay, Ohio. Additional material was collected from the same region during the latter part of the following summer.

Fresh water snakes of the species *Natrix (Tropidonotus) sipedon* Linn. were taken from the various islands of the Bass Islands region of Lake Erie. All of the organs usually inhabited by parasites were examined, but infestations were found only in the intestine. These species of parasites have not been previously reported for this host, though none of them were found to be undescribed species, with the possible exception of a single nematode of the genus *Camallanus*, as noted below.

The parasites found are as follows:

NEMATODA.

*Camallanus* sp.

A single male specimen, 10 mm. in length. The writer is unable to determine the species from the single specimen, or to state whether or not it is an undescribed species. Ward and Whipple list one nematode, *Physaloptera constricta* Leidy from this host species, but the specimen of this study is easily distinguished as of the genus *Camallanus* by the conspicuous lateral valve-shaped lips.

ACANTHOCEPHALA.

*Leptorhynchoides (Echinorhynchus) thecatus* Linton.

Natural host: various fresh-water fish.

Seventy-six specimens found in seven host specimens.

Heaviest infestation in single host: twenty-nine.

Acanthocephalans of this species were found in seven out of thirty-five host specimens, an incidence of twenty per cent. As many as twenty-nine were found in a single host. Identification of the species

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<sup>1</sup>Contribution from the Zoological Laboratories of Northwestern University, Evanston, Illinois.

was checked by Van Cleave, who stated (in personal correspondence) that the infection in the snakes is very probably accidental, being acquired by eating the infected fish which are the natural hosts.

In addition to the adult specimens, large numbers of acanthocephalan cysts were found imbedded in the wall of the intestine in two of the host specimens. From the appearance of the proboscis and the size and number of the hooks in these cysts, they have been identified as being of the same species as the adults (*Leptorhynchoides thecatus*).

#### CESTODA.

##### *Ophiotaenia perspicua* LaRue.

Type Host: *Natrix rhombifer*.

Twenty-nine found in eleven of the thirty-five host specimens, an incidence of thirty-one per cent.

Heaviest infestation in single host: eight.

The only previous record of a cestode from *Natrix sipedon* is a description by Leidy (1855) of *Taenia lactea*. This description is so brief and so general as to be applicable to any species in the genus, and indeed to many others of the family Proteocephalidae. LaRue (1911) placed this as a *species inquirenda* in his genus *Ophiotaenia*. He later (1914: 208) suggested the probability of the identity of *O. lactea* with *O. perspicua*.

In view of the inadequacy of Leidy's description, it is impossible to state definitely whether the specimens found in this study are the same as his species. Since all of the cestodes found in this study were of the same species, however, it seems very probable that the one specimen found by Leidy in the same host species is the same. Furthermore, should another species of *Ophiotaenia* at any time be found in *Natrix sipedon*, it would be equally impossible to identify it with *O. lactea*. Hence, unless Leidy's type specimen can be produced for further study (LaRue states that it is not available—1914: 208), it is convenient and logical to assume the identity of the two species. It is therefore suggested that the name *Ophiotaenia perspicua* LaRue 1911 be retained for the species and that *Ophiotaenia lactea* (*Taenia lactea*) Leidy 1855 be considered a synonym, in recognition of complete, clear description, rather than of priority.

Although the dimensions of the tapeworms found in this study vary somewhat from those described for *O. perspicua*, there is no sufficiently outstanding difference to warrant the description of this form as a new species. The variations can be accounted for, in most instances, as due to differences in extension of the material at the time of fixation. In view of these differences, which may be noted in all platodes, a note of question of the infallibility of size alone as a diagnostic character of species is not out of order here.

The characters in which the measurements obtained by the present writer differ from those given by LaRue are listed and compared in Table I. The emended characters including the range of variations are also given.

TABLE I  
Comparison of Characters of *Ophiotaenia perspicua* as Described by  
LaRue With Those Observed in This Study<sup>2</sup>

Character	LaRue	This Study	Emended Characters
Strobila.....	36 cm. × 2 mm.	3-60 cm. alive, largest 20 cm. when fixed.	3-36cm. × 2.5mm.
Neck.....	5-7 long × 0.17-0.425 broad	4-10 long × 0.185-0.5 broad	4-10 long × 0.17-0.5 broad
Mature proglottids.....	2 × 2	1.4-2.4 long	1.4-2.4 long
Ripe proglottids.....	3.8 × 1.2	1.2-2.2 broad	1.2-2.2 broad
Head.....	0.344-0.408 broad	2-6.8 long	2-6.8 long
Suckers.....	0.105-0.17	0.7-1.6 broad	0.7-1.6 broad
Cirrus pouch.....	0.255-0.32 long	0.190-0.247 broad	0.190-0.408 broad
	0.08-0.09 broad	0.088-0.129	0.088-0.17
Ratio, length cirrus pouch to width proglottid.....	3-4 (?) <sup>3</sup>	0.3-0.4 long	0.255-0.4 long
Uterus, pouches on each side.....	20-30	0.05-0.14 broad	0.05-0.14 broad
Embryo, size.....	0.018-0.021	3½-6	3-6
Eggs, size outer membrane.....	0.045-0.1	23-32	20-32
Host.....	<i>Natrix rhombifer</i>	0.0148-0.022	0.0148-0.022
		0.066-0.125	0.045-0.125
		<i>Natrix sipedon</i>	

<sup>2</sup>All measurements in millimeters, unless otherwise stated.

<sup>3</sup>There appears to be a discrepancy in the figures given by LaRue at this point, for the maximum length of the cirrus pouch as given, divided into the breadth of the proglottid gives a larger figure.

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#### LITERATURE CITED

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